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Subject: Influence of the reduced B-field on the track reconstruction

Posted by [donghee](#) on Fri, 21 Mar 2014 23:50:47 GMT

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Hi Stefano,

I try to see the effect of reduced B-field, which was intensively discussed during this week. Two plots are produced to compare the momentum resolution with two different field map configurations for "FULL" and "HALF".

Simulation has been made with single Muon particle with momentum range starting from 0.3 GeV upto 2 GeV, and scan theta between 10 and 148 degree.

PANDARoot Jan14 has been used and simulation codes are attached to cross check.

The pull distributions of momentum for  $p=0.3$  GeV and both Half and Full field map configurations cases are also attached to make sure the fit procedure. (Gauss+Pol(3) has been used.)

The momentum resolution with half field map is factor 2 times worsen than FULL field map. If you want to check the analysis code, please let me know, I will send you.

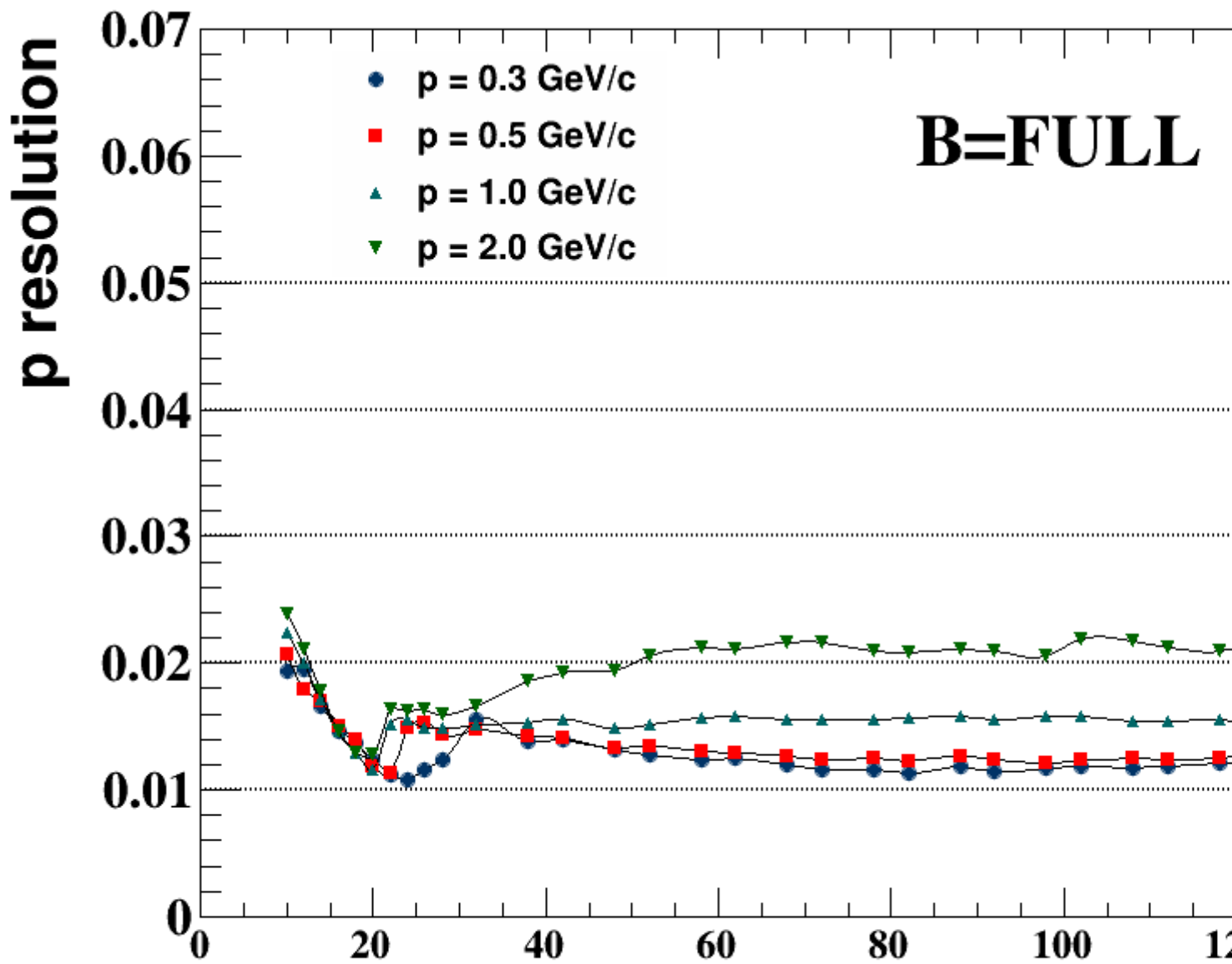
Best wishes,  
Donghee

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## File Attachments

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- 1) [run\\_pid\\_dig.C](#), downloaded 289 times
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- 3) [run\\_pid\\_rec.C](#), downloaded 291 times
- 4) [run\\_pid\\_sim.C](#), downloaded 267 times
- 5) [resolution\\_B\\_half\\_03.pdf](#), downloaded 292 times
- 6) [resolution\\_B\\_full\\_03.pdf](#), downloaded 265 times
- 7) [summary\\_for\\_B\\_full.pdf](#), downloaded 278 times
- 8) [summary\\_for\\_B\\_full.png](#), downloaded 493 times



9) [summary\\_for\\_B\\_half.pdf](#), downloaded 272 times

10) [summary\\_for\\_B\\_half.png](#), downloaded 424 times

